

Attorney Docket No. 9013.22



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Baker, et al.  
Serial No.: 09/990,832  
Filed: November 16, 2001  
For: TARGETING PEPTIDES

Group Art Unit: 1646

April 17, 2002

Commissioner for Patents  
Washington, DC 20231

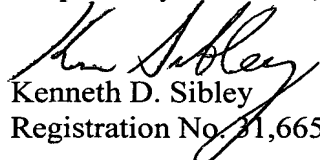
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INFORMATION DISCLOSURE STATEMENT

Sir:

Attached is a list of documents on form PTO-1449 together with a copy of each identified document. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.97 and Section 609 of the MPEP. The Commissioner is hereby authorized to charge any additional fee, which may be required, or credit any refund, to our Deposit Account No. 50-0220.

Respectfully submitted,

  
Kenneth D. Sibley  
Registration No. 31,665

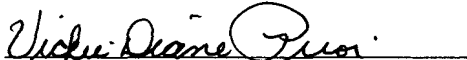


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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231, on April 17, 2002.

  
Vickie Diane Prior  
Date of Signature: April 17, 2002

Substitute form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary) Sheet 1 of 3				<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">             OIPE APR 22 2002 PATENT &amp; TRADEMARKS U.S. PATENT DOCUMENTS           </div>				<b>Complete if Known</b> Application Number 09/990,832 Filing Date November 16, 2001 First Named Inventor Baker Group Art Unit 1646 Examiner Name Unknown Attorney Docket Number 9013.22					
Examiner Initials*		Cite No.		U.S. Patent Document		Name of Patentee or Applicant of Cited Document		Date of Publication of Cited Document MM-DD-YYYY		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear			
				Number      Kind Code (if known)									
<b>FOREIGN PATENT DOCUMENTS</b>													
Examiner Initials*		Cite No.		Foreign Patent Document			Name of Patentee or Applicant of Cited Document		Date of Publication of Cited Document MM-DD-YYYY		Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
				Office      Number      Kind Code (if known)									
<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>													
Examiner Initials*		Cite No.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the book, magazine, journal, serial, symposium, catalog, etc., date, page(s), volume-issue number(s), publisher, city and/or country where published								T	
		1		Arap, et al., <i>Cancer Treatment by Targeted Drug Delivery to Tumor Vasculature in a Mouse Model</i> , <i>Science</i> , Vol. 279, pp. 377-380 (January 16, 1998)									
		2		Barry, et al., <i>Toward cell-targeting gene therapy vectors: Selection of cell-binding peptides from random peptide-presenting phage libraries</i> , <i>Nature Medicine</i> , Vol. 2, No. 3, pp. 299-305 (March 1996)									
		3		Cwirla, et al., <i>Peptides on phage: A vast library of peptides for identifying ligands</i> , <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 87, pp. 6378-6382 (August 1990)									
J		4		Douglas, et al., <i>Targeted gene delivery by tropism-modified adenoviral vectors</i> , <i>Nature Biotechnology</i> , Vol. 14, pp. 1574-1578 (November 1996)									
3		5		Goldman, et al., <i>Targeted Gene Delivery to Kaposi's Sarcoma Cells via the Fibroblast Growth Factor Receptor</i> , <i>Cancer Research</i> , Vol. 57, pp. 1447-1451 (April 15, 1997)									
		6		Harari, et al., <i>Targeting an adenoviral gene vector to cytokine-activated vascular endothelium via E-selection</i> , <i>Gene Therapy</i> , Vol. 6, pp. 801-807 (1999)									
C		7		Koivunen, et al., <i>Isolation of a Highly Specific Ligand for the <math>\alpha_5\beta_1</math> Integrin from a Phage Display Library</i> , <i>Journal of Cell Biology</i> , Vol. 124, No. 3, pp. 373-380 (February 1994)									
B		8		Krasnykh, et al., <i>Characterization of an Adenovirus Vector Containing a Heterologous Peptide Epitope in the HI Loop of the Fiber Knob</i> , <i>Journal of Virology</i> , Vol. 72, No. 3, pp. 1844-1852 (March 1998)									
C		9		Merrick, et al., <i>Comparison of Adenovirus Gene Transfer to Vascular Endothelial Cells in Cell Culture, Organ Culture, and In Vivo Transplantation</i> , Vol. 62, No. 8, pp. 1085-1089 (October 27, 1996)									
		10		Palmer, et al., <i>Selection of antibodies to cell surface determinants on mouse thymic epithelial cells using a phage display library</i> , <i>Immunology</i> , Vol. 91, pp. 473-478 (1997)									
		11		Pasqualini, et al., <i><math>\alpha_v</math> Integrins as receptors for tumor targeting by circulating ligands</i> , <i>Nature Biotechnology</i> , Vol. 5, pp. 542-546 (June 1997)									
D		12		Pasqualini, et al., <i>Organ targeting in vivo using phage display peptide libraries</i> , <i>Nature</i> , Vol. 380, pp. 364-367 (March 28, 1996)									
		13		Rajotte, et al., <i>Molecular Heterogeneity of the Vascular Endothelium Revealed by In Vivo Phase Display</i> , <i>J. Clin. Invest.</i> , Vol. 102, No. 2, pp. 430-437 (July 1998)									
		14		Rogers, et al., <i>Enhanced in vivo gene delivery in human ovarian cancer xenografts utilizing a tropism-modified adenovirus vector</i> , <i>Tumor Targeting</i> , Vol. 3, pp. 25-31 (1998)									
D		15		Szardenings, et al., <i>Phage Display Selection on Whole Cells Yields a Peptide Specific for Melanocortin Receptor 1*</i> , <i>Journal of Biological Chemistry</i> , Vol. 272, No. 44, pp. 27943-27948 (October 31, 1997)									
C		16		Tomko, et al., <i>HCAR and MCAR: The human and mouse cellular receptors for subgroup C adenoviruses and group B coxsackieviruses</i> , <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 94, pp. 3352-3356 (April 1997)									
V		17		Vigne, et al., <i>RGD Inclusion in the Hexon Monomer Provides Adenovirus Type 5-Based Vectors with a Fiber Knob-Independent Pathway for Infection</i> , <i>Journal of Virology</i> , Vol. 73, No. 6, pp. 5156-5161 (June 1999)									
		18		Watkins, et al., <i>The 'adenobody' approach to viral targeting: specific and enhanced adenoviral gene delivery</i> , <i>Gene Therapy</i> , Vol. 4, pp. 1004-1012 (1997)									
		19		Wickham, et al., <i>Adenovirus targeted to heparan-containing receptors increases its gene delivery efficiency to multiple cell types</i> , <i>Nature Biotechnology</i> , Vol. 12, pp. 1570-1573 (November 1996)									

Examiner Signature	Date Considered
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Substitute form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	09/990,832
		Filing Date	November 16, 2001
		First Named Inventor	Baker
		Group Art Unit	1646
		Examiner Name	Unknown
Sheet 2 of 3	Attorney Docket Number	9013.22	
<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	
20	20	Wickham, et al., <i>Increased In Vitro and In Vivo Gene Transfer by Adenovirus Vectors Containing Chimeric Fiber Proteins</i> , <i>Journal of Virology</i> , Vol. 71, No. 11, pp. 8221-8229 (November 1997)	RECEIVED APR 24 2002 TECH CENTER 60022900
21	21	Wickham, et al., <i>Targeted Adenovirus Gene Transfer to Endothelial and Smooth Muscle Cells by Using Bispecific Antibodies</i> , <i>Journal of Virology</i> , Vol. 70, No. 10, pp. 6831-6838 (October 1996)	
22	22	Wickham, et al., <i>Targeted Adenovirus-Mediated Gene Delivery to T Cells via CD3</i> , <i>Journal of Virology</i> , Vol. 71, No. 10, pp. 7663-7669 (October 1997)	
23	23	Zinn, et al., <i>Imaging and tissue biodistribution of <sup>99m</sup>Tc-labeled adenovirus know (serotype 5), Gene Therapy</i> , Vol. 5, pp. 798-808 (1998)	
	24	Wickham, et al., <i>Targeting of adenovirus penton base to new receptors through replacement of its RGD motif with other receptor-specific peptide motifs</i> , <i>Gene Therapy</i> , Vol. 2, pp. 750-756 (1995)	
	25	Hart, et al., <i>Lipid-Mediated Enhancement of Transfection by a Nonviral Integrin-Targeting Vector</i> , <i>Human Gene Therapy</i> , Vol. 9, pp. 575-585 (March 1, 1998)	
26	26	Girod, et al., <i>Genetic capsid modifications allow efficient re-targeting of adeno-associated virus type 2</i> , <i>Nature Medicine</i> , Vol. 5, No. 9, pp. 1052-1056 (September 1999)	
	27	Romanczuk, et al., <i>Modification of an Adenoviral Vector with Biologically Selected Peptides: A Novel Strategy for Gene Delivery to Cells of Choice</i> , <i>Human Gene Therapy</i> , Vol. 10, pp. 2615-2626 (November 1, 1999)	
28	28	Dmitriev, et al., <i>An Adenovirus Vector with Genetically Modified Fibers Demonstrates Expanded Tropism via Utilization of a Coxsackievirus and Adenovirus Receptor-Independent Cell Entry Mechanism</i> , <i>Journal of Virology</i> , Vol. 72, No. 12, pp. 9706-9713 (December 1998)	
29	29	Bartlett, et al., <i>Targeted adeno-associated virus vector transduction of nonpermissive cells mediated by a bispecific F(ab')<sub>2</sub> antibody</i> , <i>Nature Biotechnology</i> , Vol. 17, pp. 181-186 (February 1999)	
30	30	Hall, et al., <i>Targeting Retroviral Vectors to Vascular Lesions by Genetic Engineering of the MoMLV gp70 Envelope Protein</i> , <i>Human Gene Therapy</i> , Vol. 8, pp. 2183-2192 (December 10, 1997)	
31	31	Kasahara, et al., <i>Tissue-Specific Targeting of Retroviral Vectors Through Ligand-Receptor Interactions</i> , <i>Science</i> , Vol. 266, pp. 1373-1376 (November 25, 1994)	
32	32	Valsesia-Wittmann, et al., <i>Modifications in the Binding Domain of Avian Retrovirus Envelope Protein To Redirect the Host Range of Retroviral Vectors</i> , <i>Journal of Virology</i> , Vol. 68, No. 7, pp. 4609-4619 (July 1994)	
33	33	Hart, et al., <i>Integrin-mediated transfection with peptides containing arginine-glycine-aspartic acid domains</i> , <i>Gene Therapy</i> , Vol. 4, pp. 1225-1230 (1997)	
34	34	Crompton, et al., <i>Expression of a foreign epitope on the surface of the adenovirus hexon</i> , <i>Journal of General Virology</i> , Vol. 75, pp. 133-139 (1994)	
35	35	Eavarone, et al., <i>Targeted drug delivery to C6 glioma by transferring-coupled liposomes</i> , <i>Student Research Award in the Undergraduate Degree Category</i> , World Biomaterials Congress 2000, Kamuela, HI (May 15-20, 2000)	
36	36	Tsunoda, et al., <i>Specific binding of TES-23 antibody to tumour vascular endothelium in mice, rats and human cancer tissue: a novel drug carrier for cancer targeting therapy</i> , <i>British Journal of Cancer</i> , Vol. 81, No. 7, pp. 1155-1161 (1999)	
37	37	Nicklin, et al., <i>Selective Targeting of Gene Transfer to Vascular Endothelial Cells by Use of Peptides Isolated by Phage Display</i> , <i>Circulation</i> , pp. 231-237 (2000)	
38	38	Rajotte, et al., <i>Membrane Dipeptidase is the Receptor for a Lung-targeting Peptide Identified by in Vivo Phage Display</i> , <i>Journal of Biological Chemistry</i> , Vol. 274, No. 17, pp. 11593-11598 (April 23, 1999)	
39	39	Nicklin, et al., <i>Efficient and Selective AAV2-Mediated Gene Transfer Directed to Human Vascular Endothelial Cells</i> , <i>Molecular Therapy</i> , Vol. 4, No. 2, pp. 174-181 (August 2001)	
40	40	Nicklin, et al., <i>Ablating Adenovirus Type 5 Fiber-CAR Binding and HI Loop Insertion of the SIGYPLP Peptide Generate an Endothelial Cell-Selective Adenovirus</i> , <i>Molecular Therapy</i> , Vol. 4, No. 6, pp. 534-542 (December 2001)	
41	41	Bergelson, et al., <i>Isolation of a Common Receptor for Coxsackie B Viruses and Adenoviruses 2 and 5</i> , <i>Science</i> , Vol. 275, pp. 1320-1323 (February 28, 1997)	
42	42	Abstract, Parker, et al., <i>Enhanced gene transfer activity of poly(L-lysine)/DNA complexes targeted using an oligopeptide identified by phage panning</i> , <i>Stockholm 2000</i>	
43	43	Abstract, Parker, et al., <i>Retargeting Gene Therapy Vectors Using Small Oligopeptides Identified by Phage Display Technology</i> , <i>American Society of Gene Therapy</i> , Vol. 3, No. 5 (May 2001)	
44	44	Abstract, Nicklin, et al., <i>Enhanced Gene Transfer to Endothelial Cells By Genetic Incorporation of The Targeting Peptide SIGYPLP Into the HI Loop of the Adenovirus Type 5 Fiber</i> , <i>Annual Meeting of the American Society of Gene Therapy</i> , Seattle (May 30-June 3, 2001)	
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<b>OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS</b>				
	45	Abstract, Nicklin, et al., <u>Development of an Endothelial Cell-Selective Adenoviral Vector by Genetic Modification of the Fiber Gene: Implications for Gene Therapy in Vascular Disease</u> , British Hypertension Society Annual Scientific Meeting, Oxford (September 10-12, 2001)		
✓	46	Abstract, Work, et al., <u>Use of Phage display to isolate peptides for development of efficient and selective gene delivery to vascular smooth muscle and endothelial cells in vein grafts</u> , ASGT Seattle 2001 (2001)		
✓	47	Abstract, White, et al., <u>Targeting Adenovirus to the Vascular Endothelium Using Peptide Ligands Isolated by Phage Display</u>		
✓	48	Abstract, White, et al., <u>Isolation of Peptides that Direct Adenoviral Infection to Human Vascular Endothelium</u>		
✓	49	Abstract, White, et al., <u>Isolation of Peptides that Direct Binding to Human Vascular Endothelium</u>		
✓	50	Abstract, White, et al., <u>Targeting Adenoviral Vectors to Human Vascular Endothelium using Small Peptides and Cell-Specific Promoters</u> , 2 <sup>nd</sup> Imperial College School of Medicine and Kennedy Institute of Rheumatology Symposium, Vascular Endothelium: Role in Disease Pathogenesis and as a Therapeutic Target, London (November 22, 1999)		
	51	Abstract, <u>Vascular endothelium: Role in disease pathogenesis and as a therapeutic target</u> , 2 <sup>nd</sup> Imperial College School of Medicine & Kennedy Institute of Rheumatology Symposium (November 22, 1999)		
✓	52	Abstract, Nicklin, et al., <u>Development of an Endothelial Cell-Selective Adenoviral Vector by Genetic Modification of the Fiber Gene: Implications of Gene Therapy in Vascular Disease</u> , British Hypertension Society Annual Scientific Meeting, Oxford (September 10-12, 2001)		
✓	53	Abstract, Nicklin, et al., <u>Development of Efficient and Selective Vascular Gene Therapy Vectors</u> , British Cardiac Society Annual Meeting, Harrogate (May 13-16, 2002)		
✓	54	Abstract, Nicklin, et al., <u>Targeted Adenovirus-Mediated Gene Transfer to Human Vascular Endothelium</u> , Autumn Meeting of the Scottish Society of Experimental Medicine, Dundee (November 18, 1999)		
✓	55	Abstract, Nicklin, et al., <u>Enhanced Gene Transfer to Endothelial Cells By Genetic Incorporation of the Targeting Peptide SIGYPLP Into the HI Loop of the Adenovirus Type 5 Fiber</u> , Annual Meeting of the American Society of Gene Therapy, Seattle (May 30-June 3, 2001)		
	56	Abstract, Nicklin, et al., <u>Use of Phage Display to Isolate Peptides for Targeted Gene Transfer to Vascular Endothelial Cells</u> , Scottish Cardiovascular Forum, Glasgow (January 27, 2001)		
✓	57	Abstract, Nicklin, et al., <u>Targeting Gene Transfer Selectively to Vascular Endothelial Cells Using Peptides Isolated by Phage Display: Implications for Development of Gene Therapy in Hypertension</u> , Council for High Blood Pressure Research 54 <sup>th</sup> Annual Fall Conference and Scientific Sessions		
✓	58	Abstract, White, et al., <u>Targeting Adenovirus to the Vascular Endothelium using Peptide Ligands Isolated by Phage Display</u> , Geneva 2000. J. Sub-Microscopic Cytology and Pathology		

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